From: Rob Gordon
To: Genna Porter
Subject: FW: Eng Review - River Road re-alignment
Date: Monday, January 05, 2015 7:45:06 PM

Please upload to protrack as comments to most recent stormwater submittal. Thanks.

Robert Gordon, PE
Project Engineer
City of Wilmington/Engineering
(910) 341-5856

From: Rob Gordon
Sent: Monday, January 05, 2015 7:25 PM
To: NLauretta@mckimcreed.com; Richard Collier; Kathryn Espinoza
Cc: Derek Pielech; Jim Diepenbrock; Ron Satterfield
Subject: RE: Eng Review - River Road re-alignment

Engineering has reviewed the revised plans for the River Road re-alignment. Most elements of the submittal look fine, but there are a few final comments:

1. Overall, the horizontal alignment of the MUP looks acceptable, but there are still areas that may need adjustment. For example, if the adjacent roadside ditch is more than a few feet deep, we usually ask for more than a two foot shoulder for safety. Also, grades are not specified at all on the profile sheets – only the DA sheets, which are at 100 scale. So how is the contractor to know what grade the MUP is to be graded? . Rather than providing additional detail, I would suggest modifying the notes on the MUP detail (sht 2D). The MUP must satisfy all applicable ADA requirements and the City does reserve the right to require field adjustment of the elevation and/or alignment of the MUP within reason if there are accessibility or safety concerns. Please modify the notes accordingly.
2. Please make sure inlet 22A is specified as a double grate inlet or adjust the calcs to a single inlet.
3. I have not seen the E&SC elements (other than rip-rap outlet protection and a silt fence detail) included on the plans. We do not review E&SC, but we do require site and swale stabilization specs & detail be included on the plans.

Please make the necessary changes to the plans and submit for final review (email is fine). The calcs & application on file will be considered final and complete unless the design changes. Please call or email if there are any questions. Thank you.

Robert Gordon, PE
Project Engineer
City of Wilmington/Engineering
(910) 341-5856

From: Nick Lauretta [mailto:NLauretta@mckimcreed.com]
Sent: Wednesday, December 17, 2014 5:14 PM
To: Rob Gordon

Cc: Derek Pielech; Ron Satterfield; Jim Diepenbrock; Richard Collier; Kathryn Espinoza
Subject: RE: Eng Review - River Road re-alignment

Revised stormwater plans attached.

Nick

From: Ron Gordon [mailto:Rob.Gordon@wilmingtonnc.gov]
Sent: Friday, December 12, 2014 10:52 AM
To: Nick Lauretta
Cc: Derek Pielech; Ron Satterfield; Jim Diepenbrock
Subject: Eng Review - River Road re-alignment

Engineering has reviewed the revised plans for the River Road re-alignment and have the following comments:

1. The total proposed impervious area listed on the plans does not match the application. Please revise.
2. Please label the inlet drainage areas (similar to how ditch areas are labeled) on the DA maps.
3. Please forward a copy of the revised state stormwater permit for the re-aligned River Road once received. This will not affect release.
4. Please make sure centerline monumentation is provided per 18-372 (a). Contact Peter Brennen, City Surveyor to determine monument locations.
5. The ditch R1 appears to be right on the r/w line – please extend the PDE to cover the full ditch – at least 5' beyond top of bank.
6. Note Only – you may want to adjust the waterline profile, there appears to be a conflict with structures 4 & 5.
7. Please verify the rim & pipe invert elevations in the profile match the pipe schedule & stormdrain calcs, many do not.
8. Several of the inlets are described in the (inlet) stormdrain calcs as 2CB-M or 2GI-RT. I assume the M or RT indicates the location in the middle or right side of the road, but what does the "2" indicate? Is it a double grate? If so, that does not seem to be indicated anywhere on the plans. Please clarify.
9. There is some concern about drainage within the roundabouts. As water is collected by the curbing, it will have to flow down the swale embankment at the end of the curbing – potentially causing an erosion problem.. It is not clear if there is enough water flowing along the curb to warrant additional drainage control. For the Northern roundabout, DI's that drop into PC1 would best resolve the issue – that is our suggestion, but a rip-rap channel from the end of the curb down to the channel might work as well. At the Lorraine Drive Roundabout, it is not clear how the drainage on the West (driveway 6) side of the roundabout will flow. From the profiles & crown specified, it seems as if the runoff would get trapped in the bends.

On the Northeast side, runoff appears to flow out the end of the curb, over the sidewalk to the L18 ditch. We do not typically allow drainage across a sidewalk, please consider a flume under the sidewalk or other drainage control measure.

10. The direct & contributing DA for the L6 swale listed on the calcs does not match the DA map. Please clarify.
11. The design discharge listed for PC3 appears to be incorrect (design appears OK though).
12. The L9 ditch has an end elevation of 27 – and appears to be discharging to the lake. The permanent pool of the lake is listed as 17.0 – how is it dropping the last 10 ft?
13. Please update the PC4 design info on the profile on sht 11.
14. I am not following the DA's for structures 22, 23, 25 & 26. The DA breaks do not appear to correspond with the profile. Please clarify.
15. The invert of the EW 34 & 34A are below the listed bottom elevation of Infiltration Pit A (on plans previously submitted). The calcs show a lower elevation. Please revise sht 29.
16. Swale R9 cannot extend over the MUP. Please either pipe it under the MUP or can the swale be extended to drop into the pipe between structures 22 & EW34? It is a swale with a small DA, but there are still concerns that the invert of the swale is 19.8, yet the invert of the infiltration basin is 10 (high potential for a headcut).
17. Swale R14 has a similar issue, but the DA is very small.
18. What are the cut slopes around 137-138+00? Do they exceed 3:1? Also, It appears as if the MUP is extending up a large hill in this area – can a bench not be cut out to minimize slope and improve safety? Please contact transportation planning to determine desired location of MUP.
19. The L22 DA listed on the DA map does not match the calcs.
20. Please clarify what is occurring at EW 50 as it changes directions, picks up swale drainage and extends under the MUP. Is there a structure?
21. Please make sure the design data for PC8 &9 is included on either the profile sheets or sheet 29 (not provided for this review).
22. Please bump the PDE out to cover the MUP around PC9.

Please submit one full copy of sealed calcs, plans, DA maps and any revised forms to Engineering for final review. Please call or email if there are any questions. Thank you.

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